ANTIBIOTIC RESISTANCE AND PLASMID PROFILING OF *Salmonella* Enteriditis AND Salmonella Typhimurium

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This Final Year Project Report entitled **"Antibiotic Resistance and Plasmid Profiling of *Salmonella* Enteriditis and *Salmonella* Typhimurium"** was submitted by Nurhayati binti Norizan in partial fulfillment of the requirements for the Degree of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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TABLE OF CONTENTS

ABSTRACT

ANTIBIOTIC RESISTANCE AND PLASMID PROFILING OF *Salmonella* Enteriditis AND *Salmonella* Typhimurium

It is estimated that cases of non-typhoid due to *Salmonella enterica serovar* Enteriditis and *Salmonella enterica serovar* Typhimurium carrying plasmid-encoded antibiotic resistance genes have resulted in 700 000 deaths worldwide. Extrachromosomal plasmid DNA is significantly involved in the emergence and dissemination of multiple drug resistance associated with bacterial infections in humans. This study was aimed to identify the presence of plasmid DNA in *S.* Enteriditis and *S.* Typhimurium and tested with eight antibiotics that possess different mode of action. Plasmid profiling showed that out of six, only four exhibited positive presence of plasmids with 10, 000 bp. All of the samples were found to be resistant to four to six antibiotics tested with MAR indices ranging from 0.375 to 0.625. The plasmid showed positive relationship towards antibiotic action.